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International Journal of Innovative Technology and Creative Engineering
1a park lane,
Cranford
London
TW59WA
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**USA: Editor**
International Journal of Innovative Technology and Creative Engineering
Dr. Arumugam
Department of Chemistry
University of Georgia
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**India: Editor**
International Journal of Innovative Technology & Creative Engineering
36/4 12th Avenue,
1st cross St,
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# *International Journal of Innovative Technology & Creative Engineering*

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Dear Researcher,

Greetings!

Articles in this issue discusses about NEW INSTRUCTION TECHNIQUE AND DIFFERENT METHOD IN AUDIOVISUAL AID

We look forward many more new technologies in the next month.

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Senior Research ScientistLCA and Industrial Ecology Group,Metallic& Ceramic Materials,CSIRO Process Science & Engineering Private Bag 33, Clayton South MDC 3169,Gate 5 Normanby Rd., Clayton Vic. 3168

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Assist. Prof. OndokuzMayis University

**Dr. Lucy M. Brown, Ph.D.**
Texas State University,601 University Drive,School of Journalism and Mass Communication,OM330B,San Marcos, TX 78666

**Dr. Paul Koltun**
Senior Research ScientistLCA and Industrial Ecology Group,Metallic& Ceramic Materials CSIRO Process Science & Engineering

**Dr.Sumeer Gul**
Assistant Professor,Department of Library and Information Science,University of Kashmir,India

**Dr. ChutimaBoonthum-Denecke, Ph.D**
Department of Computer Science,Science& Technology Bldg., Rm 120,Hampton University,Hampton, VA 23688

**Dr. Renato J. Orsato**
Professor at FGV-EAESP,Getulio Vargas Foundation,São Paulo Business School,Rualtapeva, 474 (8° andar)01332-000, São Paulo (SP), Brazil

**Dr. Wael M. G. Ibrahim**
Department Head-Electronics Engineering Technology Dept.School of Engineering Technology ECPI College of Technology 5501 Greenwich Road - Suite 100,Virginia Beach, VA 23462

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Assistant Professor of Computer Science, Government Arts College(Autonomous), Salem-636 007, India.

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Assistant Professor of Computer Science, Government Arts College(Autonomous), Salem-636 007, India.

**Dr. V. Karthikeyani Ph.D.,**
Assistant Professor of Computer Science, Government Arts College(Autonomous), Salem-636 008, India.

**Dr. K. Thangadurai Ph.D.,**
Assistant Professor, Department of Computer Science, Government Arts College ( Autonomous ), Karur - 639 005,India.

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Asst-Professor,Dept of Computer Science, V.L.B Janakiammal college of Arts & Science, Coimbatore,Tamilnadu, India
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**Dr. Qazi S. M. Zia-ul-Haque**
Control Engineer Synchrotron-light for Experimental Sciences and Applications in the Middle East (SESAME),P. O. Box 7, Allan 19252, Jordan

**Dr. A. Subramani, M.C.A.,M.Phil.,Ph.D.**
Professor,Department of Computer Applications, K.S.R. College of Engineering, Tiruchengode - 637215

**Dr. SeraphinChallyAbou**
Professor, Mechanical & Industrial Engineering Depart. MEHS Program, 235 Voss-Kovach Hall, 1305 Ordean Court Duluth, Minnesota 55812-3042

**Dr. K. Kousalya**
Professor, Department of CSE,Kongu Engineering College,Perundurai-638 052

**Dr. (Mrs.) R. Uma Rani**
Asso.Prof., Department of Computer Science, Sri Sarada College For Women, Salem-16, Tamil Nadu, India.

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Electrical and Computer Engineering Department, Babol"Noshirvani" University of Technology, Iran.

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**Dr. Lori A. Wolff, Ph.D., J.D.**
Professor of Leadership and Counselor Education,The University of Mississippi,Department of Leadership and Counselor Education, 139 Guyton University, MS 38677

# Contents

NEW INSTRUCTION TECHNIQUE AND DIFFERENT METHOD IN AUDIOVISUAL AID
..... [1148]

# NEW INSTRUCTION TECHNIQUE AND DIFFERENT METHOD IN AUDIOVISUAL AID

**Dr.G.D.Praveenkumar**[1]
*Assistant Professor, School of Computer Science,*
*VET Institute of Arts and Science (Co-Edu) College, Erode, Tamil Nadu, India.*
*{praveenkumargd@vetias.ac.in}*
**P.Rakkimuthu**[2]
*Asst.Professor, Department of Computer Science,*
*Bharathiar University Arts and Science College, Gudalur, Tamilnadu, India*
**A.Jaganathan**[3]
*Asst.Professor, Department of BBA(CA),*
*Bharathiar University Arts and Science College, Gudalur, Tamilnadu, India*

***Abstract - Presently, traditional educational approaches have resulted in a mismatch between what is taught to the students and what the industry needs. As such, many institutions are moving towards problem-based learning as a solution to producing graduates who are creative, can think critically and analytically, and are able to solve problems. In this paper, we focus on using multimedia technology as an innovative teaching and learning strategy in a problem-based learning environment by giving the students a multimedia project to train them in this skill set. The purpose of this project was to access the students skills in framing and solving problems using multimedia technologies. The students worked in groups and each group had to pick a topic for their project, develop, design and present it in a CD-ROM. They were then surveyed on their attitudes toward the project and their skills as a team. Results showed that the students were very positive toward the project, enjoyed teamwork, able to think critically and became active participants in their learning process. Therefore, multimedia-oriented projects, like many other problem-based learning solutions, can be used alternatively as an innovative and effective tool in a problem-based learning environment for the acquisition of problem-solving skills.***

*KEYWORDS: Multimedia, ROM, CD-ROM*

## 1. INTRODUCTION

There is a growing body of evidence that use of ICT in the classroom can enhance learning (Meiers, 2009). Computer-based multimedia learning environments - consisting of images, text and sound - offer a potentially powerful setting for improving student understanding. However, all multimedia resources are not equally effective, so the challenge teachers face is how to assess and select multimedia resources that best promote meaningful learning. How can we use words and pictures to help students explore the life stories of significant Indigenous figures, learn how the language and techniques of filmmaking are used to tell stories, explore the characteristics of scatter plot graphs, explore the properties of right-angled triangles to calculate unknown quantities, better understand the current model of the Earth's structure.

## 2. THE CONCEPT OF ICT INTEGRATION WITH MULTIMEDIA

Computer games, websites and DVDs combine text**,** sound**,** images and video to present information. Text, sound, image and video are known as multimedia components .The combination of these components is multimedia. Multimedia can be used to convey information to people effectively. It has brought fundamental changes to the way people learn, play and find information.

- e-learning purposes (education)
- entertainment
- promotional and advertising purposes
- e-publications
- modelling and simulation
- public information

**Fig 1. Multimedia in ICT learning**

### 3. Choosing the Right E-Learning Methods

The Instructional Design model called ADDIE Model which has five phases: Analysis, Design, Develop, Implementation and Evaluation. My favorite is Analysis Phase which plays a very important role in training delivery and performing all kind of analyses like need, task, topic and training evaluation.

### 3.1 Learning Content Types

There are many Content Types focused on eLearning. Those are totally based on the need analysis and the type of learners. Let us start, with the type of contents we are creating while we think Here are the most common Learning Content Types:

**Learner-centered Content**

eLearning curriculum should be relevant and specific to learner's needs, roles and responsibilities in professional life. This kind of content like skills, knowledge and all kind of learning media provided to keep the focus on learner's end.

**Engaging Content**

Instructional methods and techniques should be used creatively to develop an engaging and motivating learning experience. It depends upon developing the storyboard that has to be based on a very engaging way of learning programs.

**Interactive Content**

Frequent learner interaction is needed to sustain attention and promote learning. Scenario based learning is a good example for this kind of learning media.

1. **Personalization**

   Self-paced courses should be customizable to reflect learner's interests and needs in instructor led courses, tutors and facilitators should be able to follow the learners' progress and performance individually.

2. **Learning Pyramid**

   Designing Learning Contents also depends upon the type of eLearning methods which we choose on the analysis phase. Now let us know the details about the learning pyramid Self-paced courses should be customizable to reflect learner's interests and needs; in instructor-led courses, tutors and facilitators should be able to follow the learners' progress and performance individually.

The Learning Pyramid, researched and created by the National Training Laboratories in Betel, Maine. It illustrates the percentage of learner recall that is associated with various approaches. The first four levels lecture, reading, audiovisual and demonstration are the passive learning methods. In contrast, the bottom three levels discussion group, practice by doing and teach others are participatory (active) learning methods.

The Learning Pyramid really helps me to identify the right methods when choosing eLearning methods. I insist you to refer to this pyramid on your analysis phase while you are choosing the right eLearning methods.

Many types of eLearning can be created with advanced development tools, which are suited to the needs of the modern workplace learners. There are various types of eLearning solutions that can be employed to train the learners. Choose the type that best suits the needs of the learner, keeping in mind the available technologies that would help them access eLearning methods. Most of the eLearning methods are Synchronous and Asynchronous in nature, It depends upon the learner's need and the learning objectives you choose.

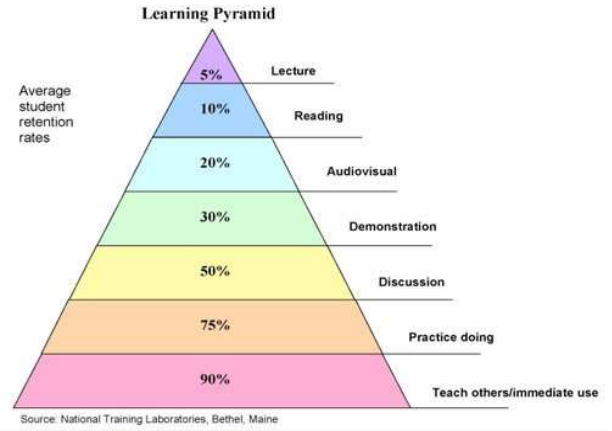


**Fig.2 Hierarchical level of ICT education**

### 3.2 Synchronous and Asynchronous Learning

**Synchronous Learning**

Synchronous events take place in real time. Synchronous communication between two people requires them to both be present at a given time. Examples of Synchronous Learning are chat and IM, video and audio conference, live webcasting, application sharing, whiteboard, polling, and virtual classrooms. This I will not cover in detail as these are basic methods that most of the organizations are already familiar with.

**Asynchronous Learning**

Asynchronous events are time-independent. A self-paced course is an example of Asynchronous Learning because online learning takes place at any time. E-mail or discussion forums are examples of asynchronous communication tools. In such cases, students ideally complete the course at their own pace, by using a Learning Platform like an LMS. Examples of Asynchronous Learning are Self-paced (SCORM), Audio/Video, E-mail, Discussion forum, Wiki/Blog, Webcasting/Conferencing, CBT and WBT, Simulations, Game-based learning.

Most of the Instructional Designers now choose the Learning Methods from the Asynchronous mode of learning. Here, I present you the following areas where you can choose eLearning methods based on your requirement and Learning Pyramid Analysis.

**Self-study**

Nowadays this is the most common method which uses wiki, blog and any reading material like ppt, pdf files to offer the initial knowledge to the employees. This also allows Subject Matter experts to the group of learners on the classroom training to resolve their queries and doubts.

**Video/audio tape**

This is the second most common method to create demo video to train the learners. It also helps to create one way of learning assets which help the learner know about the basics by watching.

**CBTs and WBTs**

In this type of learning, E-Courses are made available to the learners in the form of a CD or a Computer-based training (CBT), which can be run on the learner's system. E-courses can also be made available through Web-based training (WBT), which utilize the internet as a platform like a Learning Management System. The courses are self-paced and the learner has no interaction with an instructor or fellow learners. This works very well for adult learners who are more motivated to learn, in order to learn new skills, update their resumes and attain professional excellence.

**Blended eLearning /Instructor-led (ILT)**

This combines both the Synchronous and the Asynchronous ways of learning. Some training, like soft-skills or sales training, have to have a face-to-face component in order to be truly impactful. A blended approach works best here - where the classroom is utilized to conduct exercises and interactions. These exercises cannot be conducted in eLearning delivery as peer interaction is limited. Short e-courses can be created to help learners prepare a background for the lesson before they come to class.

**Mobile Learning**

The easy availability and affordability of mobile devices has created the space for mobile-enabled learning or mobile learning. Simply converting e-courses to mobile compatible modules is not enough. The capabilities of the mobile device, including disk space, internet connectivity and the screen size has to be taken into consideration. Authoring tools like captivate 8 provide responsive designs for the e-course. This is a huge benefit, as it cuts down the costs of production as well as the time taken to develop e-courses for mobile delivery.

**Social Learning**

The impact of social media is very strong and it can be utilized for corporate learning as well. More and more organizations are realizing the true power of social learning and encouraging their employees to interact more within themselves and other like-minded people. Employees collaborate and network on social platforms to discuss problems, queries and experiences. Social collaboration platforms are also built within the LMS so that the learners do not have to discuss on public platforms and the learning which emerges from mutual collaboration resides and grows within the LMS.

**Simulation**

Simulation eLearning is highly interactive and relies heavily upon graphics, video, audio. Importantly, there are often custom simulations videos or games, which could very well include 3D

components. New software training is an example of a course that often includes a high degree of interactivity and simulations.

**Game-based learning**

Games are considered to be fun by all, but they can be a powerful medium of experiential learning as well. Nowadays many organizations focus on the term Gamification which helps them to increase employee productivity and knowledge by motivating them to learn with game-based courses. Such courses focus on creating engagement and motivation for the learners to learn the things while they play.

Choosing the right eLearning Methods, totally depends upon the proper need analysis of the organization and upon the nature of the audiences and their collaboration methods. Knowing all of the benefits of choosing the right eLearning methods for your needs, you may want to think about implementing it when designing your next eLearning course. It can not only make the development process more streamlined and productive, but it will also provide a better eLearning experience for your audience.

**3.3 Virtual reality**

A virtual reality programme presents you with multi-sensory information and 3D effects in real-time. When you interact with a virtual reality program you have a sense of being completely immersed in it. Many museums and institutions now offer virtual tours of their buildings on their websites and these give you the impression of walking through the actual museums, making your own decisions about where to go. Virtual reality can be used to simulate real events, such as flying an aero plane. The main advantage of this is that pilots can be presented with what look like dangerous situations, and learn how to deal with them, but their lives are not at risk.

## 4. Conclusion

This paper has presented and discussed the use of multimedia in a problem-based learning environment to equip students with high-order thinking and problem-solving skills and to enable them to experience an IT-oriented learning situation. From the Paper conclude that by integrating multimedia into the teaching and learning process, the conventional curriculum model is reinforced and strengthened and a multimedia- oriented curriculum model can be instituted. The multimedia project in this course enabled the students to exercise their creative and critical thinking skills in solving their design and development problems, work collaboratively to gain team-based experience, and to face the real-life situation of problem-solving. This is a student-centered learning approach which allows them to construct their own knowledge and understanding, and determine their own learning goals. The role of the teacher, on the other hand, changes from the “sage on the stage” to a “guide on the side,” assisting the students in the construction of their knowledge.

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